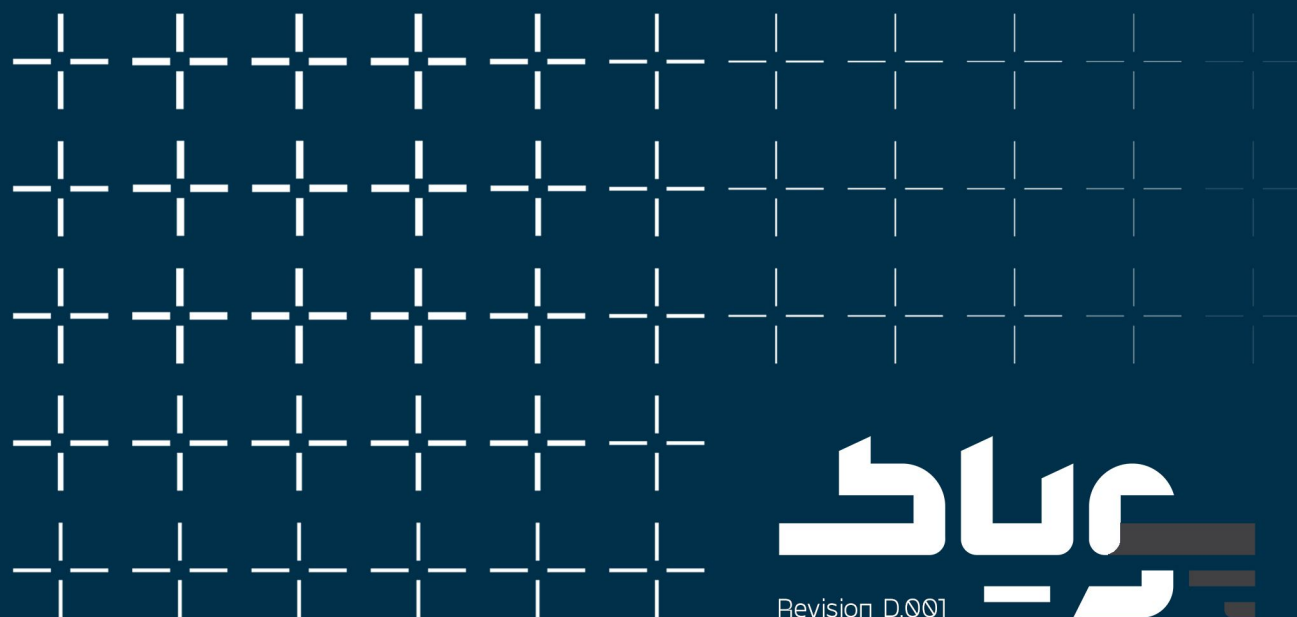


Hydrostatic Level Transmitter

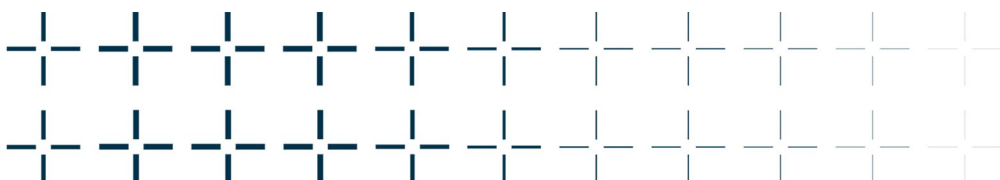
EN.Datasheet.MARUS610



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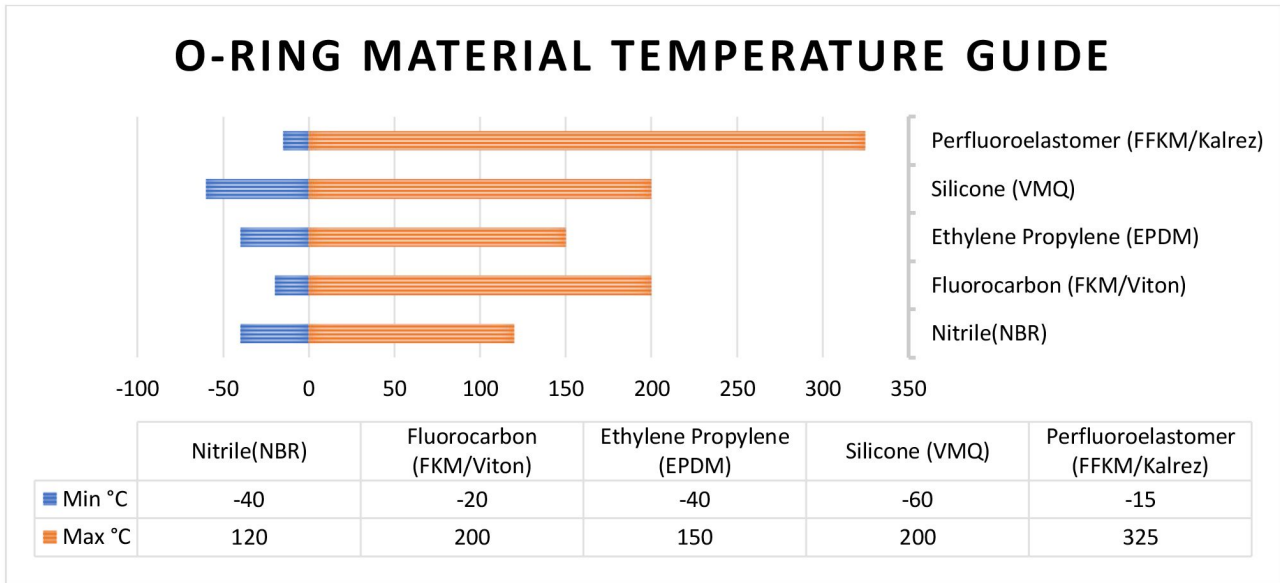
Revision D.001

Dimensional drawing		Overview		
	<ul style="list-style-type: none"> ✓ Stable and reliable ✓ Rugged and durable ✓ Excellent cost performance ✓ Meets the requirements of industrial standards. 	Accuracy	0.5%	
	Measuring Range 0 ... 6 up to 50 mH ₂ O (Relative pressure)	Hysteresis, repeatability	0.05%	
		Overpressure limit	1.5 x Range	
	Output Signal 4 ... 20mA	Instrument type Throw-in type	Thermal compensation range	0 ... 70°C
	Application The MARUS-610 hydrostatic level transmitters are used in tanks, deep wells, dams, maritime canals, and other similar applications to measure the height of water or other liquids. This device is widely utilized in the petroleum, chemical, power generation, urban water supply, maritime industry, and other professions for monitoring and controlling water and liquid levels.		Thermal error	0.2% / year
			Construction A piezoresistive silicon sensor is insulated from the exterior medium by a stainless steel diaphragm as the active pressure sensing element. This level transmitter contains a unique cable with an inner air tube to equate the diaphragm's back pressure with the ambient pressure in order to get accurate measurement results and higher stability.	Long-term stability 0.5% / year
Installation				
<p>The instrument can be hung freely from the wire. A standard signal cable can be used to extend the capillary cable. Keep water or additional contaminants from entering the capillary tube. The instrument wire should not be bent to a diameter smaller than 30 cm, and it should be shielded from any mechanical harm.</p> <p>If turbulence is possible in the tank (for example, due to the mixer operating mixers or a turbulent inflow), the instrument should be installed inside a screening tube (e.g., made of PVC). The cable should be attached to the steel lifting rope if the instrument is to be lowered deeper than 50m. Cleaning the probe diaphragm by mechanical means is absolutely prohibited. For more information, please refer to the product manual.</p> <p>CAUTION: The medium must not be allowed to freeze in the immediate vicinity of the instrument.</p>				
Electrical parameters		Technical data		
Output signal	4 ... 20mA	Degree of protection	IP68	
Power supply	10 ... 36 vDC Recommended: 24vDC two wire transmission	Material of wetted part	SS316L	
Load resistance (for current output)	$R[\Omega] = \frac{U_{PS}[v] - 8v}{0.02A}$	Material of casing	SS304, SS316L	
Operating conditions				
Operating temperature range		-25 ... 80°C		
Thermal compensation range		Normal:	0 ... 40°C	
		Special version:	-10 ... 70°C	



O-Ring selection guide:

O-rings used in Level transmitters are typically made from various elastomer materials that can withstand the required temperature and compatibility with different mediums. The selection of the O-ring material depends on the specific application requirements.



1. Nitrile (NBR):

Compatibility: Suitable for use with oils, water, hydraulic fluids, and many gases. Not compatible with strong acids, ketones, and aromatic hydrocarbons.

2. Fluorocarbon (FKM/Viton®):

Compatibility: Excellent resistance to many chemicals, oils, fuels, and high temperatures. Compatible with a wide range of fluids, including aliphatic and aromatic hydrocarbons, acids, and steam.

3. Ethylene Propylene (EPDM):

Compatibility: Resistant to hot water and steam, diluted acids, alkaline solutions, and phosphate ester-based hydraulic fluids. Not compatible with petroleum oils, greases, and fuels.

4. Silicone (VMQ):

Compatibility: Excellent resistance to extreme temperatures, weathering, and ozone. Suitable for use with water, steam, alcohols, and some acids. Not compatible with concentrated acids, oils, fuels, and aromatic solvents.

5. Perfluoroelastomer (FFKM/Kalrez®):


Compatibility: Exceptional chemical resistance, suitable for aggressive chemicals, solvents, acids, and high-temperature applications. Compatible with a wide range of mediums, including aggressive fluids and gases.

It's important to note that the temperature and compatibility ranges provided are general guidelines, and specific formulations within each material category may have slightly different properties.



 +98 51 91010033
 info@pooyac.com

Electrical Connection:

Cable outlet	2 wire 4 ... 20 mA	
	Red	+PS
	Black	Iout
	Yellow	Earth
	Blue	NC

Ordering Procedure:

Model	MARUS-610						
Accuracy	A5			0.5% FS			
Pressure Type	G			Gauge			
Pressure Range	Code	H06	H10	H25	H40	H50	Hxx*
	mH ₂ O	6	10	25	40	50	<100
Electrical Output	I			4-20mA			
Instrument type	T			Throw-in type			
Housing Material	Code	S4			S6		
	Type	Stainless Steel, 304			Stainless Steel, 316L		
Sealing material	Code	V	E	N	Q	F	
	Type	FKM/Viton	EPDM	NBR	VMQ	FFKM	
Cable length	Code	L10	L15	L30	L45	L55	Lxx**
	length	10m	15m	30m	45m	55m	Customized
Product warranty	Code	WR1 (Default)			WR3		
	Type	1-year limited warranty			3-year limited warranty		
Certification	Code	C0		C1		C2	
	Type	No Certification		Factory Calibration Certificate		3 rd Party Lab. Certificate	

*CM: According to the customer's order.

**Lxx: Customized length in meters. L60 = 60 meters of cable.

Example: MARUS-610 A5-H10-I-T-S6-N-L15-WR1-C1



